

I Claim:

1. A reaction chamber for processing a substrate wafer, comprising:

a wafer holder for receiving the substrate wafer to be processed;

a convection plate disposed above said wafer holder, said convection plate suppressing convective movements over the substrate wafer;

a gas distributor plate disposed on a side face of the reaction chamber, said gas distributor distributing process and purge gases which flow in; and

a flow plate disposed on said gas distributor plate and extending substantially in a plane perpendicular to said gas distributor plate.

2. The reaction chamber according to claim 1, wherein said flow plate is disposed approximately at a level of said convection plate on said gas distributor plate.

3. The reaction chamber according to claim 2, wherein said flow plate extends right up to said convection plate.

4. The reaction chamber according to claim 1, wherein said flow plate has a chamber-internal edge with a profile matched to a shape of said convection plate, in order to achieve a uniform distance between said convection plate and said flow plate.

5. The reaction chamber according to claim 1, wherein said gas distributor plate has a surface and a plurality of gas outlet openings formed therein distributed over said surface.

6. The reaction chamber according to claim 5, wherein said gas distributor plate has said gas outlet openings disposed only below a level of said flow plate.

7. The reaction chamber according to claim 1, wherein at least one of said gas distributor plate and said flow plate is formed of quartz.

8. The reaction chamber according to claim 1, wherein said gas distributor plate and said flow plate are produced integrally.

9. A method for processing a substrate wafer, which comprises the steps of:

introducing the substrate wafer into a reaction chamber;

feeding a process gas into the reaction chamber;

carrying out a processing step on the substrate wafer; and

purging the reaction chamber by feeding a purge gas through a gas distributor plate.

10. The method according to claim 9, which comprises rotating a wafer holder while the processing step is being carried out on the substrate wafer, and a rotation of the substrate wafer is switched off while the reaction chamber is being purged.